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LECTURES.

CLINICAL LECTURE DELIVERED AT BELLEVUE HOSPITAL,
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Pulmonary Œdema occurring in a Patient suffering from the Cirrhotic Form of Bright's Disease, complicated with Cerebral Hæmorrhage and Hemiplegia; Prompt Relief from Venesection. — GENTLEMEN: The first case which I shall bring before you to-day presents a number of points of interest. The patient, a man of about forty-eight years of age, was admitted to the hospital a little more than a week ago, with a previous history of pneumonia, according to the account given of him. Five or six hours before his admission, however, coma came on, and when he was first seen he was still profoundly comatose, while in addition there were present great dyspnœa and intense cyanosis, so that altogether death seemed imminent. The pulse was tense and sthenic, and no sign of pneumonia could be discovered, but the chest was full of subcrepitant (œdematous) and large bronchial râles. An examination of the heart showed that it was much enlarged, but no cardiac murmur could be detected, although listened very carefully for, while the patient's nose and mouth were held, in order temporarily to prevent the groaning to which he continually gave vent.

Let us pause for a moment in the history to call up before our minds as well as we may the state of affairs at the time of the man's admission. Here was a patient brought into the hospital with a very imperfect history, and suffering from the urgent symptoms just related; what inferences might be drawn from the case, and what conclusions as regards treatment? When a patient is found by the physician in a state of coma, the question at once arises, What is its origin? Sometimes this is due to an injury about the head, which has produced a fracture that may have been overlooked; sometimes to effusion of blood, either meningeal or into the substance of the brain itself. Then, again, there is uræmic, alcoholic, and narcotic coma. With which of these conditions have we to deal? I cannot stop now to go into the differential points

¹ Reported for the JOURNAL.

of diagnosis, as this would occupy the whole of the time allotted for my lecture. In the present case it is important to note that, in addition to the coma, the patient was suffering from the most marked dyspnoea and cyanosis, which would naturally point to something else than disease of the brain. Then the subcrepitant râles all over the chest, which have been mentioned, indicated œdema of the lungs. Now, whence came this? In general, it may be stated that this condition arises from trouble either in the heart or the kidneys, and sometimes in both. Here the heart was found considerably enlarged, but there was no murmur representing any valvular lesion. The question would certainly admit of much doubt whether simple enlargement of the heart might stand in a causative relation to œdema of the lungs, and therefore it seems most probable that there must have been some disease in the kidneys. In this connection, however, it is interesting to consider the significance of enlargement of the heart without valvular lesion. This, as a rule, is simply an effect, and, with the exception of certain troubles at the base of the lungs, is almost invariably the effect of renal disease. What is more, it is always indicative of one special form of renal disease, namely, the cirrhotic.

The practical point in a case of this urgent character is, What can be done for the relief of the patient? In the present instance a measure was adopted which is not often resorted to at the present day, and the fact that this was practiced here was one of the features of the case which induced me to bring it before you. The house-physician at once opened a vein in the patient's arm, and bled him to the extent of twelve ounces; and in this connection I should like to state that I firmly believe that the time is to come when venesection will assume its proper place among therapeutical measures. By this I do not mean to say that I think it will ever come into such general vogue as it was some years ago, when it was so frequently abused; but almost every physician of experience must acknowledge that there are certain cases which we are all liable to meet with in which its employment would be altogether appropriate. In this case it was indicated not because other measures might not have produced the same result, but because the latter would have required more time, and before they had accomplished their purpose the patient might have died. The great advantage about venesection is that it acts at once, and if it is going to be of service in any given case its good effects will be very promptly observed; while the various substitutes for it, such as other forms of depletion, cardiac sedatives, sudorifics, cathartics, etc., all require more or less time for their action. I will add here that the supposed danger connected with blood-letting has been very greatly exaggerated; for in cases where it may perhaps not do any good it has been over and over again shown that it is really of no injury. These apprehensions are entertained particu-

larly by the younger men of the profession, who have had little or no practical experience in regard to it, and therefore I allude to the matter now. Any one, however, who is old enough to remember the former practice must frequently have been struck with the comparative immunity from serious consequences which ordinarily followed even very copious venesection. Patients, as a rule, therefore, tolerate loss of blood much better than is generally supposed, — a fact which is also demonstrated by the severe hæmorrhages which occur in various diseases and abnormal conditions of the system. Thus, even in the later stages of typhoid fever, when there is naturally great prostration, hæmorrhage from the bowels not infrequently occurs, without, apparently, resulting in any further exhaustion of the patient.

Now let us see what was the result of venesection in this particular instance. The notes taken of the case state that the dyspnœa and cyanosis were at once relieved, and that the pulmonary œdema entirely disappeared within half an hour, while the groaning of the patient ceased, and he was evidently much more comfortable in every way. If we are to judge by this case, therefore, we should unhesitatingly say that blood-letting is of decided benefit in pulmonary œdema. I confess that from time to time I meet with cases in private practice in which I cannot doubt that venesection would be of the greatest service, and yet in which, on account of the prejudice prevailing against the practice, as well as other circumstances, it seems best to refrain from resorting to it.

The most urgent symptoms having thus been relieved, the coma next engaged attention, and it was now found that in connection with this there was hemiplegia (left) and hemianæsthesia. In all probability these conditions would depend either on cerebral embolism or extravasation of blood, and it would be inferred that this was of recent origin from the fact that reflex phenomena were lacking. The condition of the pupils was nearly normal, and the temperature about 101° F. Some bronchitis was also present. The next step in the investigation of the case was to examine the urine, and this was found to be pale in color, acid in reaction, and of a specific gravity of 1010. It also contained granular casts, and was distinctly albuminous, although the amount of albumen was not large. The patient involuntarily passed his urine freely in bed, as was also the case with the contents of the bowels. We therefore see that there is well-marked renal disease present, and it is interesting to note that the distinctive characteristics of the patient's urine — the large quantity, the low specific gravity, the presence of granular casts, and the small amount of albumen — are all diagnostic of the cirrhotic kidney, which, you will remember, was mentioned as exceedingly apt to give rise to uncomplicated enlargement of the heart.

On the next day after admission, in addition to other measures, elaterium was administered, probably with the idea of preventing a recur-

rence of the pulmonary oedema. Since then there has taken place a partial disappearance of the coma, but the patient's intelligence still remains considerably clouded. He seems to suffer somewhat from hemiplegia, and the hemiplegia and hemianæsthesia still persist. From the long continuance of the coma we are justified in inferring that these symptoms are probably not due to embolism, but rather to cerebral hæmorrhage.

Taken altogether, therefore, I think it must be admitted that this is an unusually interesting case, and in now dismissing it I wish for a moment to recur to the subject of venesection in connection with pulmonary oedema. The house-physician informs me that when the patient was first seen lying on the stretcher it seemed as if he were already past all hope, and the question arose whether it would be better to attempt to do anything for him in his desperate condition, or simply to let him die without molestation. It is highly probable, therefore, that his life was actually saved by the blood-letting, and at present there seems to be every prospect (if we may judge from the improvement that has already taken place) that the man will continue to gain still further. His temperature, I may say, remains about normal, and the specific gravity of the urine varies from 1010 to 1014.

TYPHOID FEVER: ITS CAUSES AND SOURCES, AS EXPLAINED BY THE GERM THEORY OF DISEASE.

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IN the following paper I have endeavored, by digesting the work of others, to give to the profession a clear and concise argument for the germ theory as applied to typhoid fever. And I have done so because, as it seems to me, this offers the only logical explanation of *the sources, causes, and symptoms* of that most important and insidious disease. In the preparation of this paper I have consulted a large number of works and periodicals. But I hold myself especially indebted to the very valuable work on *The Germ Theory of Disease*, by T. MacLagan, M. D., which should be carefully studied by all interested in the subject.

CAUSES.

Among the many questions now agitating the mind of the scientific world there is perhaps no one of more vital importance than the *cause* of that class of diseases generally known as the zymotic diseases, but more properly as the specific or continued fevers, as, for example, cholera, small-pox, yellow fever, typhus fever, scarlet fever, typhoid fever, cerebro-spinal fever, diphtheria, measles, etc.

Although these diseases have each their own peculiarities, they yet have many traits in common, pointing to a similarity of causation; each has a more or less definite period of incubation; each is marked especially by the phenomena of fever, by a characteristic local lesion, by a more or less definite period of duration, by being more or less contagious, by occurring, as a rule, but once in a life-time. Where there are so many points in common it is natural and rational to infer that there is a *similarity* of causation. But we cannot go farther and say that they arise from the same cause, because we know that they never breed each other. A case of small-pox imported into a neighborhood never gives rise to measles, nor does a case of typhus ever give rise to diphtheria. In other words, they *always* breed true. In looking, then, for the cause of either one of these diseases, we must be content with no theory which is not applicable to all of the group, that is, in explaining the points of similarity above noted. And, without taking time or space to give the history of all the causes that have been proposed, natural and supernatural, organic and chemical, we will come at once to the point, and express our conviction that in the germ theory of disease, as lately developed, we have found the true solution of the difficulty.

The germ theory is not new, having been several times suggested in past ages; but of late years it has received much attention from some of the brightest minds in the profession, as well as from others already distinguished in different branches of science. But by the latter it has been mostly studied from the biological point of view, and has been considered by them largely with reference to the theories of evolution and spontaneous generation. The latter theory especially is intimately connected with our subject, but the intention and scope of this paper preclude its extended consideration. Suffice it to say, then, that the weight of evidence to date is entirely opposed to the theory of spontaneous generation.

What is the germ theory of disease? It is the belief that certain diseases are produced by the reception into a susceptible system of *specific* organisms, germs, or contagia possessing almost unlimited powers of reproduction.

The first question is, What is a contagium? In his masterly work on the subject, MacLagan says: "A contagium is a morbid agent which is propagated in and given off from the bodies of the sick, and is capable, when received into a susceptible healthy body, of producing in that body a disease similar to the one during whose course it was formed."

By a series of ingenious investigations, M. Chauveau and Dr. Burdon-Sanderson have proved that the contagium is composed of minute *particles*, which are neither soluble nor diffusible; and from the fact

that they have eluded every chemical test it is fair to infer that they are organic, and differ very little from the fluids in which they are known to be contained. The contagium was supposed to be a variety of bacteria, but Dr. Bastian has shown that as fluids known to be contagious develop bacteria, in just so much do they lose their contagious properties. Moreover, bacteria are now recognized as a result of the decomposition of organic matter, and in the case of contagious fluids it is thought that they may be developed from decomposition of the contagia themselves. Probably no one has ever yet seen a contagium, although Dr. Beale and other microscopists have with very high powers made out a mass of "fine granulations" which they have supposed to be contagia. But no glass has yet been made powerful enough to individualize and differentiate them. From the action of the contagia within the body we know that under favorable circumstances they have an almost infinite power of reproduction. "The characteristic quality of a contagium, or virus of a communicable disease, is its capacity of undergoing almost unlimited multiplication when introduced into an appropriate medium."¹

"*The poisons of infectious diseases can reproduce themselves, and to an unlimited extent.* With a minimum quantity of vaccine virus we can vaccinate a child and obtain vaccine matter from him. From this child ten or even more children can be successfully vaccinated; so that what at first was a scarcely appreciable quantity of the virus of the disease is sufficient to produce the disease in one, ten, one hundred, one thousand, ten thousand, children, and so on *ad infinitum*."²

"Of all perishable things protoplasm is the most perishable." And this dictum holds perfectly true in regard to the protoplasm of contagia, for on exposure to the air they are quickly destroyed. At the same time, under favorable protecting influences, they may retain their power of contagion for a very long period. It will not be necessary to offer proof of this, as every physician will remember examples in his own practice.

This, then, sums up what we know of the contagia: (1) that they consist of minute particles, which are neither soluble nor diffusible; (2) that they are organic; (3) that under favorable circumstances they have an almost infinite power of reproduction; (4) that they always breed true; (5) that they are readily destroyed on exposure to the air, but may under protecting influences retain their virulence for a long time.

One other property these contagia have in common, and in common with all organisms: they require for their support nitrogen and water.

¹ Dr. Baxter, Reports of the Medical Officer of the Privy Council, New Series, No. VI. 1875.

² Liebermeister, Ziemssen's Cyclopædia of the Practice of Medicine, vol. i., page 9.

And herein we shall principally find the explanation of their effect upon the economy. But after they arrive within the body they can acquire their nitrogen and water *from* the body only; and if they live within the body, and at the expense of the body, what are they? They are *parasites*. Now it is well known that parasites are propagated only in certain localities where they find their own appropriate *nidus*; that different parasites appropriate different localities; and that these localities may be of very small extent. While these contagia, then, as organisms may be able to live wherever they can find a sufficiency of nitrogen and water, as parasites they can reproduce themselves and multiply only where they find their appropriate *nidus*.

By considering contagia in this light, as parasites, we can explain many points heretofore clouded in mystery. When we understand that each disease has its own contagium, which, being a parasite, requires its own particular *nidus*, we can easily understand why these diseases always breed true; also, wherein susceptibility consists. Why is it that one person escapes the disease to which others are falling victims? Formerly no satisfactory answer was possible. Now we know that, for some reason or other, the *nidus* is absent. From some individual peculiarity it may never have been present; from some particular cause — as pregnancy — it may be temporarily lacking; or from a previous attack of the same disease it may have been exhausted. And thus we can also account for the fact that these diseases occur, as a rule, but once in a life-time; the *nidus* is exhausted and not reproduced. Further on we shall see that the necessary *nidus* for the contagium of each disease is undoubtedly located at that point where the characteristic local lesion of that disease afterwards occurs.

Typhoid fever is one of the least contagious of the specific fevers. And why? Because its *nidus* is found in the ileum, and the chances of the contagia reaching this point are comparatively small. The contagia may be taken into the circulation through the lungs, but it is quite conceivable that they might be so received, even in considerable numbers, and yet never succeed in reaching the only place where they could fructify. But the contagia of typhoid fever are usually, without doubt, conveyed into the system along with food or drink, and then the road to the ileum is a broad and easy one, which too often “leadeth to destruction.” Each one of this group of diseases has its own tolerably definite period of incubation. During this time the contagia are actively multiplying and spreading themselves through every tissue of the body. This period of incubation is terminated by a general *malaise*, accompanied by headache; then one or more chills are experienced; and from these we generally date the commencement of the disease. We do not know — and probably never shall know — how many contagia are necessary to produce the disease, nor at what rate

they are reproduced. But it is perfectly rational to suppose that the severity of the case will depend, first, on the number of the contagia received, and, second, on the vitality of the nidus in the individual attacked. At first the system takes no note of these invaders. But after a time they multiply and permeate the tissues to such an extent that the system rebels. And why? Because these contagia are appropriating to themselves the nitrogen and water necessary to the support of the body and to the due performance of its functions. It can no longer support itself and them too without increased effort. And, as the contagia still go on multiplying day after day, so must the body put forth greater and still greater effort to accomplish the work forced upon it.

From whence do the contagia derive the supply of nitrogen required for their support? Nitrogen is supplied to the body by means of food, both animal and vegetable, and having passed through the various phases of digestion appears in the plasma, or liquor sanguinis, whence it is taken up and incorporated by the nitrogenous tissues. When it has performed its duty it is given back into the circulation and carried to the liver, where it is changed into urea, and, passing on again, is finally eliminated by the kidneys. Now, as the contagia are organisms, and in a state of strong vital activity, they must (1) require the same food as other nitrogenous tissues, and (2) be more urgent in their requisition for it. Consequently they step in and appropriate from the liquor sanguinis the supply of nitrogen which, under normal conditions, should go to support the nitrogenous tissues of the body. This explains why in these cases there is such a wasting of those tissues; they are robbed of their food, and are virtually starving. The patient may be taking in nitrogen in ordinary or even in greatly increased quantities, but it is the contagia, and not his own tissues, that are gaining the benefit of it. The *constructive* processes are therefore interfered with to a very serious extent. But at the same time the *destructive* processes are going on, and of course with greater activity, as a necessary result of the increased activity of the circulation. In other words, a greater amount of used-up nitrogenous material is carried to the liver to be changed into urea; and as a natural consequence there is usually an increased amount of urea eliminated by the kidneys. But sometimes we find, on the contrary, that the amount of urea eliminated is decreased instead of increased. And for the explanation of this apparent contradiction we must look still further into the action of the contagia.

Besides nitrogen, the contagia require water in large quantities for their support.

The fever symptoms — heat, dryness, and thirst — are to be accounted for on two grounds. We have seen that in consequence of the presence

of the contagia the constructive processes must be very greatly increased, although it is the contagia rather than the tissues of the body that gain the benefit of the increased efforts. But the efforts are made all the same, and through the usual processes. We have seen that the destructive processes are also continued and increased. All this implies hyperæmia and increased circulation, which is not local but general, because the contagia permeate every part and tissue of the body. But fever patients are continually thirsty. Why? Because the contagia are greedily absorbing the water from the body. These patients consume enormous quantities of water, but they eliminate very little. Why? Because the contagia take it up. And now we see why, in some cases, — they are always the worse ones, — there is a deficient elimination of urea. The urea is present in the circulation in greater quantity, but the kidneys cannot obtain a sufficient supply of water to enable them to excrete it. There is therefore a *retention* of urea, which, if it reaches a certain limit, will produce its own toxic effect upon the system. Moreover, after a time the kidneys may become exhausted and congested and inflamed by their over-exertions, and by the excessive amount of urea passing through them, to such an extent as to make them utterly unfit to continue their functions, and then we have *suppression* of urine.

We have seen that the presence of the contagia in the various tissues of the body necessarily produces an increased circulation, which is general because they are present everywhere. But in each one of these fevers there is a point where the increase of circulation is decidedly more marked, and which results in the characteristic local lesion. In typhoid fever this point is situated in the ileum, and especially in Peyer's patches.

When speaking of the contagia as parasites we pointed out the known fact that parasites are propagated only in certain localities, where they find their own appropriate nidus. Wherein this nidus consists we do not know, but we do know that it constitutes a necessary second factor. In the locality, then, where this nidus exists the contagia are not only present, but undoubtedly in much greater numbers than elsewhere. This fact alone would account for a more marked increase in the circulation. But, over and above this, the contagia are *reproducing* themselves in this locality, and in enormous and constantly increasing numbers. Now, in the higher organisms we know that the phenomena of reproduction are always accompanied by increased heat and circulation, and we may reasonably infer the same with contagia. We have therefore two excellent reasons for *expecting* a decided local hyperæmia at the location of the nidus. And local hyperæmia is essentially the condition of the local lesion in each one of the contagious fevers.

If the local lesion were produced secondarily, by some poison devel-

oped by the disease, we can see no reason why in the same disease it should always occur at the same point. But if the disease be produced primarily by a parasite which can find its nidus only in a certain definite locality, we see that there is good and sufficient cause for expecting a marked local hyperæmia at that locality. And this local hyperæmia, in various degrees of intensity, constitutes the local lesion.

We have said that the contagia permeate all the tissues of the body. And when we remember the delicacy and sensitiveness of the nervous system we should naturally expect it to show early and continued evidence of disturbance.

We know that the blood supply of the whole body is regulated by the vaso-motor system of nerves, and that this system is exceedingly sensitive to reflex as well as to direct irritation. In the class of diseases now under consideration this reflex action would arise, in the first place, from the locality of the nidus; for here the contagia are not only present and interfering with the constructive processes of the tissues, but they are reproducing themselves in enormous numbers. All this implies the necessity for an increased supply of blood at this point, and consequent stimulation and irritation of the vaso-motor nerves, which are, of course, by reflex action, communicated to the nervous centres. And as the contagia are multiplied and carried to all parts of the body, so must they also from all parts of the body give rise to irritation of this system of nerves. But it has been proved that the vaso-motor nerves take their origin exclusively from the cerebro-spinal system. And when we remember that about one fifth of all the blood in the body is carried to the head, we shall see that the brain is likely to be infested with contagia as soon as, or even sooner than, the other tissues of the body, in which case there would speedily be direct as well as reflex irritation of the vaso-motor system.

An urgent demand is made for more blood to assist in the nutritive processes. The vaso-motor system responds by contracting the capillaries and sending the supply of blood with increased rapidity, by the larger vessels, to those points where it is most needed. The consequence is that with increased arterial action we have capillary anæmia.

Now which of the tissues are particularly dependent on the capillary circulation? The brain, spinal cord, and skin. And so in the capillary anæmia of the brain we find the cause of the headache; in a similar condition of the spinal cord we see reason for backache and general weakness; and in a like state of the skin we can trace the origin of chills. And this explanation is particularly satisfactory when we remember that during a rigor the patient has the feeling of cold, while the temperature of the body, as shown by the thermometer, is really increased. As stated above, with increased arterial action we have capillary anæmia.

But as the contagia are still further multiplied, and penetrate to those tissues chiefly or wholly nourished by the capillaries, the vaso-motor nerves *relax their contractile action* so as to allow of the passage of the now necessary supply of blood, and *then* the patient has fully arrived at the condition of *fever*. It is to be remarked that at this time the headache subsides and generally disappears.

The capillary anæmia is, then, but a temporary condition, a stage in the development of the fever, an effort of nature to conserve the equilibrium of her forces. But this effort is soon overpowered by the rapid spread of the contagia, and the duration of this effort is in direct proportion to the number of contagia present, — in other words, to the severity of the case.

But now, as the contagia continue to multiply and to pervade all the tissues in ever-increasing numbers, what condition do we find in the nervous centres? Just the same as in the other nitrogenous tissues: increased circulation and heat, and at the same time starvation and wasting. But organs of such delicacy as the brain and spinal cord cannot stand either the congestion or the starvation without consequent derangement of function. And so, in proportion to the development of these conditions, we find delirium and convulsions and — if relief does not come in time — coma. But we must not forget that another agent may be also working in the same direction. For, as we have already pointed out, if the kidneys, from previous disease, or from an insufficient supply of water, or from exhaustion, are unable to perform their functions, then an excess of urea remains in the circulation, and superadds its baleful influence to that of the contagia.

But now the question arises, How can this state of things ever end otherwise than in death? If the contagia need only nitrogen and water for their support, why do they not always go on in their rapacious robbery as long as any nitrogen and water remain in the body, and so of course invariably produce death? If we had looked upon the contagia simply as organisms, we could give no plausible answer to these questions. But we have shown good reasons for considering them in the light of *parasites*, and as parasites we have seen that they are absolutely dependent for reproduction on their appropriate *nidus*. But this *nidus* must sooner or later become exhausted. Now, at the time when this occurs, there must be enormous numbers of the contagia, in various states of development, in the system, and these must of course go on and attain their growth; but in the mean time they are being gradually eliminated by the usual destructive processes of the nitrogenous tissues, and reproduction having ceased their reinforcements are cut off. What, then, occurs within the economy? Why, a reduced demand for nitrogen and water, which produces (1) reduced heat; (2) reduced circulation; (3) an increased water supply for the use of the kidneys; and, (4)

partly from the increased water supply, and partly from the relaxed condition of the capillaries, an increased action on the part of the skin. We see, therefore, that the defervescence is caused by, but does not date from, the exhaustion of the nidus; a proportion, at least, of the contagia remaining in the system must be disposed of before relief can be obtained.

In earlier days, the disease was supposed to begin suddenly with a chill, and to cease abruptly with a sweat; but in these days of accurate thermometry, we know that the temperature rises gradually, even before the chill, and abates gradually, even before the sweat. And the reason is plain: the contagia must have increased to a certain degree before they could cause irritation enough to produce the initial chill, and they must have decreased to a certain degree before they could leave a sufficient water supply to enable the excretory organs to resume their functions, and so produce the critical diaphoresis and diuresis.

But, unfortunately, the disease does not always take this favorable turn, and death still occurs in a lamentably large proportion of cases. Now death may be caused either by coma or by asthenia; or, in other words, either by exhaustion of the nervous system, or by exhaustion of the circulatory system. We have seen that coma is produced by the excessive production of the contagia and consequent impairment of the brain, and precisely so asthenia is produced by the excessive production of the contagia and impairment of the heart. When we remember the vascularity of the muscles of the heart, and the enormous amount of labor imposed upon them by the febrile conditions of the system, it will not seem strange that they should succumb to combined malnutrition and overwork. But, clinically, we are most apt to find a combination of these two conditions of coma and asthenia, and then we must conclude that the whole system is simply overpowered and swamped by the multitude of contagia.

Of course individual peculiarity must have a very great influence in determining the preponderance of one set of symptoms or the other. In children, and in older patients who are of a decidedly nervous temperament, or who have shown a previous tendency to head symptoms, we should expect more of delirium, convulsions, and coma; and in elderly or weakly patients, and in those who have suffered from any disease of the heart, we should anticipate asthenia. But, aside from such individual peculiarities, we should expect death precisely in proportion to the number of contagia produced; and this may explain a fact which is frequently remarked, that is, that strong, robust patients so often "fare hardly." We may rationally suppose that an exceedingly healthy body would present an exceedingly vital nidus, and so, having received the contagia, reproduce them in unusually great numbers.

Having thus tersely, but we hope sufficiently, explained the causation

of typhoid fever and its various symptoms, it is satisfactory to find that we have at the same time given good and sufficient reason for that course of treatment which experience has taught us to adopt as the most satisfactory. By the administration of milk and beef tea we supply the much-needed nitrogen in its most easily digestible forms, and we no longer fear to give water in sufficient quantities.

(To be concluded.)

RECENT PROGRESS IN ORTHOPÆDIC SURGERY.¹

BY E. H. BRADFORD, M. D.

Hip Disease.—Extension in hip disease, so common a method of treatment with us, appears to be somewhat a novelty to French surgeons. Its merits are pointed out in recent papers by three French writers. Armand² discusses the effect of extension. To prove that the joint surfaces at the hip-joint are separated by extension, which is denied by some German authorities, Armand inserted iron pins, one into the ilium and the other into the trochanter, driving them firmly in through the skin and muscle. On applying an extension of ten pounds the two iron pins were seen to have been pulled apart two millimetres. The beneficial effects of extension, according to the writer, are due to the fact of distraction of the affected surfaces, to overcoming the exaggerated contraction of the muscles about the joint, and also, in M. Armand's opinion, as a means of partially immobilizing the joint.³

Hutchinson⁴ suggests a "physiological" treatment of hip disease, which, if able to stand the test of farther experience, promises to be a great advance in the treatment of joint affections.

He claims that apparatuses are "unnecessary, cumbrous, and uncomfortable," and to be abandoned if it can be done without danger. In treating hip disease there are four indications: (1) fixation of the joint; (2) extension; (3) removal of the superincumbent weight; (4) exercise, to improve the general condition.

According to Mr. Hutchinson, sufficient fixation of the joint is given by the muscles above the joint. Extension enough to relieve the spasm of the muscles of the thigh which crowd the head of the bone into the inflamed acetabulum can be obtained if the patient be placed upon crutches, the sound foot being raised by a high shoe, so that the foot on the affected side cannot touch the ground, and as the patient stands the limb is suspended.

¹ Concluded from page 640.

² Thèse de Paris, No. 36, 1878.

³ Revue des Sciences médicales, October 15, 1878. For effect of extension on the knee-joint, Riedel, Deutsche Zeitschrift f. Chir., Bd. x., Heft 1, 1878.

⁴ American Journal of the Medical Sciences, 1879.

If necessary, extension can be applied at night in the ordinary way by weight and pulley. In Mr. Hutchinson's cases this was not required. The method of treatment is not suitable for "acute arthritic coxalgia," where the patient cannot be moved without causing extreme pain. Extension by long splint or weight and pulley is in these cases required, and rest in bed until this inflammatory stage is passed.

Dr. Hutchinson's cases treated in this way are few as yet, as he has employed the method of treatment but a short time. One of the reported cases appears to be exceedingly satisfactory.¹

In a recent article in the JOURNAL, March 6, 1879, Dr. C. F. Taylor, of New York, illustrates the "mechanical treatment" of hip disease and the proper theory which should regulate it by citing a few successful cases.

Results in Excision of the Hip-Joint. — Elben² reports the analysis of results in three hundred and eighty-eight cases of excision of the hip-joint for coxitis. One hundred and eighty-four died; seventy-five did not remain under observation. Of the living, in sixty-one only were the ultimate results as to the usefulness of the limb ascertained. Of these, forty-one were able to walk without an apparatus, fifteen needed an apparatus, and five had no use of the limb.³

Inequality in the Length of the Lower Limbs. — Irregularity in the length of the lower limbs has hitherto been regarded as a rather exceptional deformity. Mr. Barwell, in his book on Lateral Curvature, mentions having met with a few cases in healthy people where noticeable difference without known cause was found.⁴

Dr. Hunt⁵ claims to be the first to have suggested that "bilateral symmetry as to length is exceptional," a fact of the greatest importance in suits for malpractice, as is illustrated by Dr. Hunt's article, and also in orthopædic practice.

Dr. Cox⁶ measured the lower limbs in fifty-four healthy persons, and in only six were the limbs of the same length. The variations were from one eighth to seven eighths of an inch.

Dr. Wight⁷ gives the measurements of sixty persons, and concludes "that the greater number of limbs, comparing the limbs of the same person, show a difference in length. About one person in every five has limbs of the same length." The difference is usually from one eighth of an inch to an inch. In one case the difference was as great as one and three eighths inches.

¹ See also Proceedings of the Medical Society of the County of Kings, April, 1879, page 27.

² Centralblatt f. Chirurgie, No. 2, 1879.

³ See also On Excision of Hip-Joint, Poore, New York Medical Record, February 1, 1879.

⁴ The reporter has recently seen a similar case in a child four years old.

⁵ American Journal of the Medical Sciences, January, 1879.

⁶ American Journal of the Medical Sciences, April, 1875.

⁷ Archives of Clinical Surgery, vol. i., No. 8, February, 1877.

Mr. Callender¹ believes that further investigations are needed before the asymmetry in the length of limbs be accepted. He has measured forty healthy individuals, and found the limbs of equal length in all but two, in whom the variation was slight.

The matter seems to be settled by the measurements of the bones of the lower extremities by Dr. Roberts,² who found asymmetry the rule in femora and tibiæ in eight skeletons, and by Dr. Dwight.³ The latter reports the measurement in eleven skeletons: in only five were the femora equal; in one case the difference was three fourths of an inch. Tibiæ were equal in only two cases. In some cases the longer femora and tibiæ were on the same side, and in some cases on different sides.

Treatment of Club-Foot.—Ogston⁴ claims that the "pernicious doctrine that ordinary congenital club-foot depends on paralysis or contraction of certain muscles and fasciæ is still believed. Consequently a cure, or at least a marked improvement, is too confidently expected to result from the operation of subcutaneous division of these structures." Tenotomy is "one of the smallest and least weighty factors" in the treatment of club-foot. Tenotomy should be regarded as merely an adjunct to other means of treatment.

The deformity is not due to either paralysis or contraction of certain muscles; the whole limb is distorted; every structure contributes its relative share towards producing the deformity and towards keeping it up. The proper treatment consists in fulfilling the indication of gradually bringing the limb into the right form. Tenotomy is required because the muscles are powerful structures, but their division is no essential part of the treatment. Division of anything except the tendo-Achillis is rarely necessary. The fashion of promiscuous division of all the main tendons around the ankle cannot be too strongly condemned. Such tendons as possess synovial sheaths cannot be divided without the certainty, or next to certainty, that they will never unite,—a fact often experimentally proved, and never refuted. It is a mistake to divide tendons according to any fixed plan or rule, the only wise course being to wait until, during the progress of the foot towards rectification, it becomes evident that some structure, whatever it be, must be divided. The tendo-Achillis is almost always to be cut, and as a rule this is the only structure requiring division. This should not be divided until after the foot has been unfolded, so that the deformity has become an equinus.

Dr. Ogston believes that mechanical treatment is indispensable in treating club-feet. The use of elastic tubing, as advised by Mr. Bar-

¹ St. Bartholomew's Hospital Reports, vol. xiv., 1878, page 187.

² Philadelphia Medical Times, August 3, 1878.

³ Identification of the Human Skeleton. Massachusetts Medical Society's Communications, 1878, page 175.

⁴ Improved Method of treating Club-Foot, Edinburgh Medical Journal, December, 1878.

well, is a method of mechanical treatment, but not so useful in many cases as some other methods. Ogston prefers the repeated application of plaster-of-Paris bandages. The child should be chloroformed, in order to keep the foot still during the application of the bandage. The foot and leg should be manipulated and brought into position; a flannel bandage is applied directly to the skin, and the tendency of the foot to resume its former position overcome by passing loops of adhesive plaster, which are held by an assistant, the one over the toe and pulled outward, the second over the instep and pulled inward. A plaster bandage is then adapted. This should be renewed about every six weeks. As soon as the varus position is corrected the tendo-Achillis is to be cut and the foot gradually pulled upward in the same way, and a plaster bandage applied.¹

THE CONVENTION OF AMERICAN MEDICAL COLLEGES.

IN compliance with a series of resolutions offered by Professor Gross at the last meeting of the American Medical College Association, held at Buffalo in June, 1878, a call was issued by this association for a convention of delegates from all duly accredited medical colleges in the United States to meet at Atlanta, Georgia, May 2, 1879. Each medical school was requested to send two delegates, one from its board of trustees, the other from its faculty, and to instruct these representatives so as to authorize their action in behalf of some uniform system of medical teaching more in accordance with the spirit of the age and the standard of education in Europe. When the convention assembled, Prof. S. D. Gross, of the Jefferson Medical College, was called to the chair, and Prof. Starling Loveing, of the Starling Medical College, of Columbus, Ohio, was appointed secretary. The committee on credentials announced that the following schools were represented: State University of Iowa, T. S. Parr and D. F. Peck. Starling Medical College, S. Loveing. Miami Medical College, John A. Murphy. Medical Department University of Michigan, E. G. Dunsted. College of Physicians and Surgeons of Baltimore, E. Lloyd Howard and John S. Lynch. Kentucky School of Medicine, A. B. Cook. University of Louisiana, E. S. Lewis. Woman's Medical College of Pennsylvania, Frances E. White and F. B. Pearce. Rush Medical College, Chicago, Moses Gunn. Medical College of South Carolina, J. Ford Prisleau and J. P. Chazal. Detroit Medical College, Leartus Connor. University of Louisville, John D. Crowe and John M. Bodnie. Vanderbilt University, T. Menees and D. C. Kelley. Louisville Medical College, C. W. Kelly and W. B. Fleming. Medical College of Indiana, J. F. Hibbard. Atlanta Medical College, John G. Westmoreland, J. T. Johnson. Central University Louisville, Dudley Reynolds. Jefferson Medical College, Samuel D. Gross. Chicago Medical College, N. S. Davis. Medical College of Ohio, W. W. Dawson. University of Maryland, L. McLean Tiffany. Southern Medical College, T. S. Powell.

¹ Other recent papers on club-foot: An Analysis of Forty Cases, Swan, Medical Press and Circular, April 24, 1878; Shaffer, Traction in a New Apparatus, New York Medical Record, November 23, 1878; Hutchinson, New York Medical Record, December 14, 1878.

Medical College of Evansville, Indiana, H. G. Jones and G. B. Walker. Nashville Medical College, J. Roberts, Duncan Eve, A. L. De Maas. College of Physicians and Surgeons, Keokuk, J. C. Hughes.

The meeting being organized, Prof. N. S. Davis read the preambles and resolutions adopted at the last meeting of the American Medical College Association, and stated that the object of the convention was to have some authoritative expression of opinion from the colleges in regard to uniformity in medical teaching, and to see if the colleges of this country could not be induced to take a step forward. The students should furnish evidence that they have mastered the ordinary English branches, and should be required to attend three annual courses of medical instruction prior to graduation. The sentiment of the meeting was expressed in the following propositions, the first of which passed after discussion; the second passed unanimously.

First, all medical colleges should require attendance upon three regular courses of lectures during three separate years before admitting students to become candidates for the degree of M. D. Second, the medical colleges should require, before admitting to matriculation, a preliminary examination, such examination to embrace at least the elements of the physical sciences in addition to a fair English education.

On motion these propositions were directed to be transmitted to the American Medical College Association, and that body was apprised of the action of this convention, which adjourned *sine die*.

THE AMERICAN MEDICAL COLLEGE ASSOCIATION.

THIS Association, of which the object is the confederation of American medical colleges, so as to secure uniformity of medical teaching and maintain a creditable standard of attainments among graduates, also convened in annual session in Atlanta on the Saturday before the meeting of the American Medical Association, Dr. N. S. Davis presiding. Seventeen colleges were represented. On motion of Dr. W. F. Peck, resolutions of respect and condolence were adopted, deploring the death of the president of the Association, Dr. John B. Biddle, during the past year; and they were ordered to be entered upon the minutes. The propositions embodied in a communication from the Convention of American Medical Colleges, favoring three regular courses of lectures in three separate years, and advocating a preliminary matriculant examination, were freely discussed. As the former was in effect an amendment to the Articles of Confederation, it was laid over for one year. The second question was also laid upon the table until the next meeting. Professor Bodine offered the following amendment:—

“Resolved, That the majority of the members of one faculty shall not constitute the majority of the members of another faculty, unless the sessions of the two schools are held simultaneously,” which was also laid over.

The following resolution was offered by Dr. S. Chaillé, and, after discussion, was adopted:—

“Resolved, That it shall be considered derogatory to the dignity and good

standing of any medical college represented in this association to advertise in any other than a strictly medical publication the names of its professors, with their respective chairs."

Professor Chaillé also offered the following amendment, which was laid over under the rules : —

"No college shall advertise, in any other than a strictly medical publication, the names of its professors, with their respective chairs."

Prof. Greenville Dowell offered the following : —

"*Resolved*, That the Metric System shall henceforth be used in the minutes of this Association, and in all other papers published under its authority, and that the professors represented in this Association be requested to teach the Metric System in their schools," which was tabled.

The subjoined amendment was offered by Professor Dunster: For Section I. Art. V. of the By-Laws, substitute the following : —

"Delegates to the meetings of the Association may be chosen from among the members of the governing board of a college, or from members of the faculty having a vote upon the graduation of students, or from both, but in no case shall such double representation entitle the college to more than one vote in the Association."

Professor Gross, of Philadelphia, was elected president of the Association for the ensuing year, Prof. N. S. Davis, of Chicago, vice-president, and Dr. Leartus Connor, of Detroit, secretary and treasurer.

THE ASSOCIATION OF AMERICAN MEDICAL EDITORS.

In the Senate Chamber of the Capitol at Augusta, Georgia, May 5, 1879, the Association of American Medical Editors held its eleventh annual meeting on the evening before the session of the American Medical Association, fifteen journals being represented, as follows : —

Dr. L. Connor, *The Detroit Lancet*.

Dr. Duncan Eve, Dr. D. J. Roberts, *The Southern Practitioner*.

Dr. Frank Woodbury, *Boston Medical and Surgical Journal*.

W. B. Jones, M. B., *Southern Journal of Medical and Physical Science*, Nashville.

Dr. E. S. Dunster, *Michigan Medical News*.

Dr. T. S. Powell, *Southern Medical Record*.

Dr. Theophilus Parvin, *American Practitioner*.

Dr. W. T. Goldsmith, *Southern Medical Record*.

Dr. A. N. Bell, *The Sanitarian*.

Dr. J. G. Westmoreland, *Atlanta Medical and Surgical Journal*.

Dr. Wm. Brodie, *New Preparations*.

Dr. Robert C. Word, *Southern Medical Record*.

Dr. Dudley S. Reynolds, *The Medical Herald of Louisville*.

Dr. J. V. Shoemaker, *Medical Bulletin*.

Dr. Word, of the *Southern Medical Record*, acted as the secretary of the meeting.

The retiring president, Dr. Wm. Brodie, delivered an address on Medical Journalism, in which he strongly condemned the practice of allowing patent medicines to be advertised in reputable medical journals, and denounced it as contrary to the spirit of the Code of Ethics. He concluded by offering a series of resolutions expressing this sentiment. On motion of Dr. Dunster, the resolutions were adopted, and ordered to be presented to the American Medical Association. Dr. Parvin urged the publication of details of cases by country physicians, as a means of increasing our knowledge of clinical medicine. He announced the death of two medical editors, Dr. Isaac Hayes and Dr. Waddell, and, upon his motion, a committee was appointed to present a proper memorial upon this subject. After some interchange of opinions and social converse, the Committee on Nominations reported the following ticket for officers, which was unanimously elected, the secretary casting the ballot for the Association:—

President, Dr. Thomas S. Powell, *Southern Medical Record*, Atlanta, Ga.

Vice-President, Dr. Frank Woodbury (Philadelphia), *Boston Medical and Surgical Journal*.

Secretary, Dr. Frank Davis, *Chicago Medical Journal*.

Place of meeting in 1880, New York city. The editors of the *Southern Medical Record* gave a dinner to the Association on the 7th of May, at the residence of Dr. Powell, which greatly enhanced the pleasure of the meeting, and extended the opportunities for acquaintance and social intercourse, the visitors carrying away with them a warm appreciation of Georgia hospitality.

THE AMERICAN MEDICAL ASSOCIATION.

In the city of Atlanta, Georgia, the thirtieth annual meeting of the American Medical Association was convened on the 6th of May, 1879, and, as usual, remained in session four days. On account of the distance from the homes of most of the members, it was scarcely expected that any considerable number would be present, but it was found that about three hundred and fifty delegates were in attendance from all parts of the country, the Southern States more particularly. Among those present were Professor Gross, N. S. Davis, J. M. Toner, Governor A. Garcelon of Maine, L. Sayre, J. J. Woodward, Theophilus Parvin, R. Beverly Cole of California, Greenville Dowell, Eugene Grissonn, Chas. F. Folsom, L. F. Warner, Joseph H. Warren, H. O. Marcy, Azel Ames, Jr., E. Seguin, Montrose A. Pallen, Alfred C. Post, Hermann Knapp, J. L. Cabell, C. W. Chamberlain, Chas. W. Page, Dudley S. Reynolds, R. J. Duglison, and Wm. B. Atkinson.

While the work in the sections, with but few exceptions, was less valuable than usual, and much time was wasted by reading papers unduly long and on unimportant subjects, the reports on the progress of the several departments of medical science, presented in general session by the chairmen of the sections, were of more than usual interest and value, and were listened to with marked attention. The weather was extremely favorable for the Association, and indeed was almost too fair, as it had a tendency to lead the members to desert their work in the sections in the afternoon, in order to accept the hospitalities of

private citizens, and to enjoy driving through the streets of this capital city, which has been termed the Chicago of the South, and which, in the combined advantages of beauty of location, healthfulness of climate, and cordiality of its citizens, is probably unexcelled by any city of its size in America.

The private entertainments were magnificent in their hospitality, and were characterized by such unmistakable appreciation and kindness as to be highly complimentary to the Association; they reflected the greatest credit upon the committee of arrangements and the profession and citizens of Atlanta.¹

(*To be concluded.*)

ADULTERATION OF FOOD AND MEDICINE.

OUR community preserved its equilibrium pretty well, notwithstanding the revelations concerning its food and drink proffered by Dr. Angell under cover of the Social Science Association. In fact, these disclosures, from the serious and careful refutations which they immediately elicited, had the unexpected effect of reassuring those whom they were intended to alarm. With regard to the use of poisonous adulterants, Professor Babcock, for several years the official analyst of Boston, assures the public that in a large experience he had rarely found, in foods or drinks, substances which would be likely to be injurious to health. According to the same authority, the records of the milk inspector of the city of Boston, extending over a period of twenty years, give the sworn statements of the results of nearly five hundred analyses of milk, and in no instance is anything other than water and caramel reported. The average amount of water found in Boston milk was about ten per cent., which amount is decreasing.

There is certainly nothing in this over which to get very much excited, or to lose one's appetite, and probably nothing with which local boards and the State Board of Health are not fully competent and ready to deal.

We have been led to indulge in a little local self-complacency in reference to this question of the adulteration of foods, etc., by the recent offer of a large sum of money by a liberal gentleman to the Massachusetts Public Health Association for the examination of food and medicines, and the prosecution of adulteration before the courts, and also by the perusal of a paper reprinted from the Transactions of the Medical Society of the State of New York.²

We doubt the necessity for the work which the Public Health Association proposes to undertake in this direction, and, bearing in mind the experiences in England under the British Sales of Food and Drugs Act of 1875, we doubt still more the practical results of its efforts, even when backed by zeal and money, without some very careful previous legislation, a good outline of which we have in this paper of Mr. Squibb. By what he terms a "very rough estimate" he calculates that the losses to the population of the State of New York, "through practices of carelessness and adulteration, through over-com-

¹ The entertainments will be referred to more particularly in our next number in a letter from Atlanta.

² Proposed Legislation on the Adulteration of Food and Medicine. By Edward R. Squibb, of Brooklyn. New York: G. P. Putnam's Sons. *

petition and greed for money making, which such a law is intended to check, and finally prevent, cannot be less than seven hundred thousand dollars per annum, though probably much more;" and he estimates that if only one fifth of this loss were saved it would still be a considerable economy to establish a state board of health at a cost of eighty thousand dollars a year, without trusting to fines or emoluments to reimburse any part of such cost. According to this scheme, a state board of health is to be created for the purpose of executing the proposed law, to which other functions may be added as the occasion arises. In this State the analysis and prosecution of adulterations is permitted to the board, but is not obligatory, and not certainly its chief function. Our author thinks that the prosecution of offenses of this class by institutions or societies has rarely, if ever, been effectively done. He appreciates the difficulties in the way of a national act, and the importance and feasibility of similar legislation in the different States. The necessity for a very careful definition of what constitute food and medicine, and the offense of adulteration, is pointed out. In a note at the end of the pamphlet are some instructive examples of the difficulties met with under the British Sales of Food and Drugs Act, and which are liable to present themselves in all large communities. To these might be added a remarkable example which occurred in London last January. The officer of health for the city applied to the Mansion House for an order for the condemnation of seventy-nine sacks of flour as unfit for human food. This so-called flour was adulterated with seventy-nine per cent. of sulphurate of lime or plaster of Paris. The plaster head of a donkey made from it was exhibited to show the nature of the article. The magistrate, however, refused to grant the order for condemnation on the ground that it was his duty "to protect the public;" that it was not satisfactorily proven that the mixture was intended for food; and he proposed that an individual who had advanced a sum against the flour should come into court and prosecute the importers for obtaining money under false pretenses.

If this subject of adulteration is to be discussed, and any additional legislation for its prevention is requisite, Mr. Squibb treats it in the serious and accurate spirit which it requires. As communities grow larger, competition sharper, and the lot of the poorer classes harder, the need for additional activity in the prevention of adulteration will doubtless make itself felt. But we believe that the laws and the provision for their execution are sufficient in Massachusetts for the present emergency.

MEDICAL NOTES.

—The meetings at Atlanta seem to have been favored with exceptionally fine weather and a fairly large attendance. We present this week an account of some of the work done preliminary to the meeting of the Association, a further report of which will be given next week. At the meeting of the National Board of Health, Dr. Turner, the president, and Dr. Billings, the vice-president, were present, and also Dr. Folsom of this city. The principal health and quarantine officers of the United States were invited to attend. The Sanitary Council of the Mississippi Valley, which had been called at Mem-

phis, adjourned to meet at Atlanta, that it might consult with the National Board. The result of these deliberations was the adoption of views strongly in favor of the adoption of a national system of quarantine, not only as regards seaports, but also river and railroad travel. The feeling of the South was represented to be very strong upon this point. Considerable disappointment is said to have been felt by the board that the Harris Bill (a report of the discussion of which we give elsewhere) did not pass. Dr. Lewis A. Sayre was elected president of the National Association, and its next meeting will be held in New York.

—Some of our readers may have noticed lately, in the windows of druggists' shops, certain articles offered for sale under the name of "Dr. Durkee's Liver Pads." As the impression is likely to be produced that these things were contrived by the late Dr. Silas Durkee of this city, it is thought but just to his memory to state that this is not the fact. No one acquainted with him could for a moment believe it. We also learn that the proprietors of the article in question deny that the name they have adopted has any reference whatever to Dr. Silas Durkee.

—Dr. George B. M. Rowe has been chosen superintendent of the City Hospital. He succeeds Dr. Cowles, who has been appointed superintendent of the McLean Asylum for the Insane.

—The death of Dr. Charles Murchison, F. R. S., from heart disease, is announced as having occurred April 23d in London.

—Dr. F. A. Howe, of Newburyport, has sailed for Europe, to be absent about three months.

PHILADELPHIA.

—An interesting case of self-mutilation occurred in the Insane Department of the Pennsylvania Hospital recently. One of the patients, a man under middle age, deliberately dug out his left eyeball with his finger nails, more particularly that on the forefinger of his right hand. The eye was perfectly healthy, and had not occasioned him any pain. It was enucleated as well as it could have been done by a skillful surgeon, the muscles being cut close to the globe, and the optic nerve looking as if divided with the knife. Having been rather noisy during the day he had been strapped in bed, but the hands were not secured, or the injury could not have occurred. While the patient was doing the mischief he kept perfectly quiet; he then summoned an attendant, and said that his eye was bleeding. That the operation was not painless was shown by the fact that he complained loudly when the surgeon examined the parts afterward. A case almost parallel with this occurred here some years ago; but the mania for mutilation among males seems more particularly directed to the genitals. Dr. Thomas G. Morton says that some years ago one of the patients was seen giving something to the fowls in the garden. Some one casually inquired what he was doing, and he replied that he was "feeding his testicles to the ducks." On examining him it was found that he had actually castrated himself, and had chopped his testicles into mince-meat, which he used as bait for the ducks. This story reminds one of the dogs of Paracelsus and his celebrated radical cure for hernia.

—The walking mania is on the decline. A good commentary upon the in-

tellectual status and scientific value of the performance was recently given in this city. A Philadelphia character, well known in the streets during the day and in the station-house at night, who is called "two for five" (because in his humble avocation as street vender of lead-pencils these words are most often reiterated), was induced to walk a match against time, which was a success and was largely attended. The fact that he was well known as an idiot rather added to than detracted from the attractions of the entertainment, and did not prevent him from carrying off the purse. He is now the lion of the hour, and indulges in the luxury of a clean shirt and white necktie, and is open for an engagement for a match with some other idiot.

The cruelty of making women walk in these pedestrian contests for the benefit of speculators was well set forth in a memorial and protest from the committee of hygiene of the Philadelphia County Medical Society, addressed to the mayor of the city, and requesting his interference. The resolutions pointed out that these exhibitions were devoid of any scientific value, their only interest consisting in the physical torture of depriving a woman of sleep, except a few minutes at a time, for periods extending to one month, the distance walked each day being only twenty-four miles, and therefore not remarkable. Some of the poor subjects themselves are known to be suffering from pelvic disorders, which must be aggravated by this prolonged exertion, being forced as they often are by brutal men to continue at the task until they drop utterly exhausted, in a condition from which they must be months in recovering. It would scarcely be credited that our advanced civilization would tolerate such exhibitions as these.

— At the last meeting of the County Medical Society Dr. Allis made some remarks upon the Treatment of Fractures involving the Elbow-Joint, in which he blamed the internal angular splint for a peculiar deformity often resulting, which he graphically termed the "shot-gun" deformity. When the arm is extended at right angles to the body, the fore-arm instead of being in the line with the arm, in this condition is deflected to the ulnar side. Dr. R. J. Levis offered some practical observations upon his treatment of fractures which were original, and which will be given in detail in a subsequent number of the JOURNAL.

— The state legislature has again failed to pass the bill creating a state board of health.

WASHINGTON.

— The bill defining the powers of the National Board of Health, introduced by Mr. Harris into the senate on April 30th, was met by a resolution offered by Mr. Hamlin to recommit the same, with instructions to report a code of rules and regulations by which the provisions of the bill are to be enforced. After a long and interesting discussion, occupying parts of the sessions on April 30th, May 1st, 2d, and 5th, the resolution prevailed, and the bill was recommitted. — Mr. Hamlin thought that the rules and regulations respecting commerce should be made more clear, and that, as the bill read, too much power was given to men with no knowledge of commerce. He raised the question as to how far its provisions might interfere with foreign powers, or with certain stipulations in treaties with the same. — Mr. Kernan discussed

the influence of the bill on the port of New York and its quarantine laws, and read from the *Journal of Commerce* a letter by Dr. Vanderpoel, health officer of that port, showing the defects in a recent order from the secretary of the treasury, establishing a rigid quarantine on certain materials imported from Russia, and the consequent embarrassment to foreign commerce. — Mr. Garland, in reply, showed by the provisions of the bill that the powers of the board were doubly guarded by requiring the concerted action of the president and secretary of the treasury in approval; pointed out the necessity for such legislation; and asked, if the board be not considered the proper party, that such proper party be named, etc. — Mr. Harris (May 1st), in further reply, considered that the bill dealt with the commerce of foreign nations, and among the several States; that with these the States themselves could not deal; and that there are only seventeen of the States pretending to have quarantine regulations at all. The New York quarantine system was an exception to the inefficiency of the others, which latter he characterized as utterly inefficient, and without uniformity or reliability. The bill requires the coöperation of the board with sanitary authorities, and authorizes such local authorities to enforce its provisions. — Mr. Morgan (of Alabama) made some very extended remarks to show that yellow fever cannot be controlled by quarantine, and read the report of the British Commission of 1852 to support his views, alluding to what had been already stated in the course of the debate, — that every season found cases of yellow fever in New York harbor, at New Orleans, and at Mobile. — Mr. Jonas (Louisiana), in reply, gave it as the opinion of nine tenths of the medical profession in localities where the disease had prevailed that it was imported, and stated that in New Orleans there were no cases from 1858 to 1866, a few sporadic cases in 1866, an epidemic in 1867, no cases from 1867 to 1878, except a few sporadic cases in 1873, 1874, and 1875. Both Morgan and Jonas cited Dr. Choppin, president of the New Orleans Board of Health, in support of their views, and the discussion did not make it very clear as to which view he held. The letter of Dr. Choppin as read referred simply to the importance of letting local authorities manage their own quarantine, without calling in question the efficacy of the quarantine itself. Mr. Jonas called attention to the fact that the letter was written last spring, before the last epidemic, and before the establishment of the National Board of Health; that many of the statements would not be applicable to the present bill; and that he was satisfied of the concurrence of the New Orleans Board of Health in the provisions of the bill itself. — Mr. Plumb (Kansas) discussed Sections 9 and 10 of the bill relating to diseases of cattle, which were inserted at the instance of the committee on agriculture. He offered an amendment to give the board increased power and jurisdiction over the quarantine of cattle, and considered the propriety of including as a member of the board some one especially skilled in veterinary art, etc. — Mr. Maxey (Texas) considered the exclusion of yellow fever from Texas as due to the rigid quarantine. He desires to have the Sections 9 and 10, relating to diseases of cattle, stricken out entirely from the bill, as not coming properly within the province of the board.

LETTER FROM LONDON.¹*The Care of the Insane in Great Britain. — Lunacy Laws.*

MR. EDITOR, — In my last letter I gave you some account of our present lunacy laws, and of the various phases through which the question passed before we reached our present stand-point. I stated that the act which forms the basis for the somewhat complicated system designed to prevent abuses was passed in 1845 at the instigation of the present Earl of Shaftesbury. For thirty years it has worked with tolerable smoothness, but the world gets more critical as time goes on, and arrangements which were thought to be as near perfection as possible twenty years ago are now found to be full of crudities and imperfections. First and foremost, attention is being called to the general ignorance which exists on the subject of insanity, both in its medical and its legal aspects, amongst medical practitioners as a body. Notwithstanding the great power which is put into their hands — for what power is greater than that of depriving men and women of their liberty? — no proper provision is made for the education of students in this important branch of the profession; where the means of study are provided, no compulsion is brought to bear upon them to insure their making use of it, and at scarcely any of the examinations is the subject included in the list of those upon which students will be questioned. Some statistics bearing on this point which I recently obtained show that out of six hundred students who are annually entered at the various medical schools in London, not more than from forty to fifty at the outside get any methodical clinical instruction in mental diseases, and not more than a fourth of the whole number attend any lectures on the subject. Even where lectures are delivered they are for the most part very few in number, and are introduced into the course on medical jurisprudence. Thus, then, the vast majority of practitioners are turned into the world without having ever seen a lunatic medically, profoundly ignorant of everything which relates to insanity, and yet liable at a moment's notice to be called upon to decide knotty points regarding the best method of dealing with persons who, though eccentric, are perhaps quite harmless and happy in their liberty. And this is not all. Every year there is a considerable number of cases where the validity of a will is contested on the ground of insanity. In such cases medical men are the most important witnesses, and the disposal of property is decided very much by the evidence which they give. Yet for all these important duties the general run of practitioners are wholly uninstructed, and have to trust to their common sense to decide upon their course of action. The anomaly involved by such a state of things is so outrageous that it is surprising that something has not hitherto been done to put a stop to it. It will not probably be tolerated much longer, and various means are being suggested for its cure. One party is in favor of taking the power of certification out of the hands of the ordinary practitioners, and putting it into those of experts. This, however, is a measure which would be contrary to the general feeling of the profession. There is a much stronger party, including in its ranks some of the most eminent psychological specialists,

¹ Concluded from page 660.

who would like to see the study of insanity included in the ordinary curriculum of general medicine. They are in favor of bringing its treatment more within the scope of the general practitioner; they would lessen the influence of asylums, and would treat a much larger number of patients who are not dangerous at home among their friends, or as single patients in the private families of medical men. All those who look at the question in this light would strongly deprecate any plan which would tend to specialize more and more the study and treatment of mental diseases. The suggestion to which I have above referred, of placing the certification of insanity in the hands of experts, is as follows: Any medical man should have the power of sending a patient whose mental condition pointed to insanity to a special hospital, — and in every district there would be one for the purpose, — but beyond this he would be unable to act. Immediately after his reception at the hospital the patient would be examined by an expert, who would be a public servant kept for that and analogous purposes, and the power of certification would lie wholly in the hands of the expert. He would decide what should be done with the patient, and, in the event of his consigning him to an asylum, he would visit him from time to time, and report upon his progress. Thus the functions of the ordinary medical practitioner would be reduced simply to calling attention to the case, and it would then pass into the hands of the pure specialists. So long as the education of students in this subject is so totally neglected as it is at present, nothing short of some measure allied to this will satisfy the public; the only other alternative is to make it compulsory for students to attend lectures, and to go through a sufficient course of clinical study in mental diseases, and it is in this direction that I believe the next step will be taken.

The question which of all others, however, is exciting the public mind has reference to the relative merits of public and private asylums. An idea seems to have got abroad that persons are needlessly sent to private asylums for the sake of the profit which they bring to their proprietors; or that, having been rightly committed to the asylum, they are kept there much longer than there is any occasion for, — even long after the normal tone of mind has returned. These charges are by their very nature difficult to parry. In very many cases insanity is by no means obvious to the ordinary observer; in fact, is often with difficulty detected by the expert, though in certain directions it may perhaps be present in an aggravated form. The charge of wrongful confinement is generally brought by the patient himself after his discharge, and in such cases there are almost always a number of people to come forward to assert that, though often with the patient, they had noticed nothing wrong about him. Yet in such cases it frequently happens that nothing short of confinement would have constituted efficient treatment. Again, an insane patient frequently improves so rapidly after admission to an asylum that it is difficult to say where his weak point lies; and yet such patients if discharged and exposed to the worries and anxieties of life would very shortly show all the signs of insanity as markedly as before. Hence it is necessary to keep many cases under control for a while after all their symptoms have disappeared. In such cases, then, it is very easy to say that there has been wrongful detention, and it is very hard to prove the contrary to a badly informed public. It is quite evi-

dent that a temptation exists for the proprietor of the asylum, and that the position is one which an unprincipled man might take advantage of. To some extent, abuses may be prevented by the supervision of the commissioners, but it is just in this kind of case that commissioners find it most difficult to act. They cannot keep a constant supervision over every individual patient, and it is frequently so hard, after a short examination, to say whether a patient is sane or insane that they rarely interfere in this respect. As a matter of fact, the public view of the matter is probably a greatly exaggerated one. The select committee of the House of Commons, which sat for many months two years ago to inquire into the working of the lunacy laws, paid special attention to this point; and in their report is a clause in which they say that "the committee received copious evidence which led them to the conclusion that although the present system was not wholly free from risks which might be lessened, though not wholly removed, by amendments in the existing law and practice, yet, assuming the strongest cases against the existing system were brought before them, allegations of serious abuses or of *mala fides* were not substantiated." A possible abuse of this nature is, however, a subject about which the public is easily worked into a ferment, and there are at present some few persons who have been confined as lunatics — and obviously rightly so confined — who are doing everything in their power to inflame the public mind against asylums. They have managed to get the ear of two or three influential journals, and certain of the medical journals even have written in the same sense, the result being that the owners of private asylums are beginning to fear for their very existence. The plan which is advocated by the would-be reformers is to abolish private asylums altogether; to establish public asylums for the better classes, where the charges would be only sufficient to make a fair return on the outlay; and to have these asylums brought under closer supervision than at present. It is quite certain that if this plan were adopted there would be many complaints on the part of the wealthier sections of the community. At present, the competition between private asylums being great, everything is done which can conduce to the patient's comfort, and in asylums which are intended for very wealthy persons everything is laid out on a scale of the greatest luxury, much as the patient would have enjoyed at home. Now, state institutions are proverbially less elastic than those which owe their existence to private enterprise; it is impossible to avoid a certain uniformity and routine in the manner of conducting them; and, in the case of dissatisfaction on the part of the patient or his friends, it would be less easy to remove him to another establishment. A suggestion was made in the report of the select committee that once in six months the friends of a patient should have the right to send a medical man of their own choice to examine into his state, so as to satisfy them that his detention was still requisite. The objection to this is that it is often very difficult to establish the question of sanity or insanity in a single interview, especially after residence for some time in an asylum; and it is possible that outside medical men would not unfrequently judge a patient fit to be discharged, when in reality he was far from fit to have his liberty. I may add that as investigations of this kind are in the hands of the commissioners, who have no interest either in the asylum or the patient,

they may be looked upon as wholly impartial. They, with their special knowledge, must be far better able to judge difficult points of this kind than any chance medical man. It may be necessary in the future to increase the numbers of the commissioners, or to give them more assistance in the duty of inspecting patients, and a change in this direction would be far more satisfactory than the one suggested by the committee. Another change which might be introduced would be to make two lists of the patients in each asylum: one containing the names of those who are obviously and hopelessly insane, and the other of those who are less obviously so, and who are improving. It would be in the latter group only that much supervision would be required, and those cases might be much more closely supervised than is at present possible. We may rest assured, however, that whatever may be done, and however much care may be taken to exclude the possibility of abuse, we shall still hear complaints from time to time of improper confinement. There will always be a certain number of persons who have been temporarily confined, and who on being released will raise the cry of false imprisonment.

In conclusion, I will refer to one more point, namely, the inconsiderate and not unfrequently unkind treatment which patients have to suffer at the hands of attendants in asylums. This is the greatest and most real grievance of all those which have been brought forward. Gentlemen and ladies who are accustomed to have servants about them who obey them implicitly, and are entirely subject to their will, are suddenly transferred into a position in which persons of the same rank as their own servants become in reality their masters, order them about, coerce them into doing their will, and assume a tone of familiarity which grates exceedingly on those who are quite unused to anything of the kind. The patient feels not only that he ceases to be the master, but also that he is introduced to an atmosphere which is more like that of his own kitchen than of any place that he has been accustomed to. This is one of the most knotty points in the whole question of dealing with insanity. The task of watching over the insane is one of the most disagreeable and most thankless of any in connection with the treatment of the sick. Educated persons will rarely undertake it, and thus it falls into the hands of persons of the lower orders, and these often not by any means the best samples of their class. Some authority must be committed to them, but the very exercise of this authority often induces in the patient the spirit of resistance which it was intended to subdue. Much of the stubbornness met with amongst insane patients can doubtless be traced to their disgust at being ordered about by men of the same stamp as their own grooms, and a feeling of this kind once excited must be very difficult to get rid of, and must stand greatly in the way of their progress. A lady who had been in an asylum for temporary melancholia told me that the first day after she was admitted she was a little slow in doing as she was bid, and the nurse spoke roughly to her about it. This was something she was totally unused to, and she at once resented it, and altogether refused to move, whereupon she was seized by the shoulders and pushed along. Such a thing, though very petty in itself, is intensely galling and eminently calculated to produce further trouble. I think there can be but little doubt that violence is induced in many patients in this way, who, if treated with

kindness and tact by persons of their own rank in life, would be quite tractable. This question is in reality far more important than that of the relative merits of public and private asylums, and it is one which is met with equally in all places where the insane are placed. The only solution to be found will be to induce educated men and women who are without other occupation to take up insane nursing. There are now a very considerable number of ladies who have taken up sick nursing as the business of their lives, and there seems no reason why insane nursing may not be taken up in the same way. In the case of harmless lunatics, the evil may perhaps be partly met by consigning more of them as single patients in private families, thus bringing them under the sole control of people of their own standing; but for those for whom the management of an asylum is necessary no great improvement will be effected until the problem of the attendants is solved.

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REPORTED MORTALITY FOR THE WEEK ENDING MAY 3, 1879.

Cities.	Popula- tion estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Principal "Zymotic" Diseases.	Pneumonia.	Scarlet Fever.	Diphtheria and Croup.	Diarrhoeal Diseases.	
New York.....	1,085,000	548	26.09	21.36	9.76	9.76	3.68	2.58	
Philadelphia.....	—	319	—	10.66	7.21	2.51	3.76	3.13	
Brooklyn.....	564,400	195	17.96	19.49	13.33	7.18	4.10	3.0-	
Chicago.....	—	114	—	21.93	9.65	7.90	9.65	.87	
St. Louis.....	—	87	—	8.05	12.64	—	3.45	1.15	
Baltimore.....	365,000	100	14.28	12.00	10.00	5.00	4.00	—	
Boston.....	360,000	134	19.40	8.21	10.45	1.49	4.48	.75	
Cincinnati.....	250,000	100	18.62	24.00	12.00	25.00	5.00	—	
District of Columbia.....	160,000	71	23.14	12.68	12.68	2.81	2.81	4.22	
Cleveland.....	—	—	—	—	—	—	—	—	
Pittsburgh.....	—	41	—	24.39	4.88	9.76	7.33	—	
Milwaukee.....	—	37	—	10.81	10.81	—	5.41	—	
Providence.....	101,000	37	19.09	13.51	5.40	2.70	2.70	—	
New Haven.....	60,000	—	—	—	—	—	—	—	
Charleston.....	57,000	28	25.61	10.71	3.57	—	—	7.14	
Nashville.....	27,000	16	33.19	6.25	6.25	—	—	—	
Lowell.....	53,300	18	17.60	11.11	5.55	—	—	—	
Worcester.....	52,500	16	15.89	18.75	—	—	—	6.25	
Cambridge.....	61,400	18	18.25	33.33	11.11	—	22.22	—	
Fall River.....	48,500	23	24.73	21.74	—	13.04	8.69	—	
Lawrence.....	38,200	19	25.94	21.05	10.53	5.26	15.79	—	
Lynn.....	34,000	13	19.94	46.15	—	30.77	7.69	—	
Springfield.....	31,500	8	13.24	25.00	12.50	25.00	—	—	
New Bedford.....	27,000	9	17.38	33.33	22.22	11.11	11.11	—	
Salem.....	26,400	11	21.73	9.09	—	—	—	—	
Somerville.....	23,350	8	17.86	12.50	12.50	12.50	—	—	
Chelsea.....	20,800	7	17.55	14.29	14.29	—	14.29	—	
Taunton.....	20,200	2	6.16	—	—	—	—	—	
Holyoke.....	18,200	12	34.33	33.33	—	8.33	25.00	—	
Gloucester.....	17,100	11	33.54	—	9.09	—	—	—	
Newton.....	17,100	7	21.34	42.86	14.29	—	42.86	—	
Haverhill.....	15,300	4	13.63	—	—	—	—	—	
Newburyport.....	13,500	8	30.90	50.00	—	—	37.50	—	
Fitchburg.....	12,500	7	29.20	—	14.29	—	—	—	

Two thousand and twenty-three deaths were reported: 354 from the principal "zymotic" diseases, 326 from consumption, 194 from pneumonia, 133 from scarlet fever, 98 from diphtheria and croup, 68 from bronchitis, 37 from diarrhoeal diseases, 25 from whooping-cough, 17 from typhoid fever, 13 from erysipelas, 13 from measles, eight from cerebro-spinal meningitis, four from malarial fever, three from remittent fever, two from intermittent fever, none from small-pox; indicating a considerably decreased mortality from all causes, pulmonary diseases, diphtheria and croup, cerebro-spinal meningitis, and erysipelas, and a decided in-

crease in scarlet fever. From *bronchitis* 29 deaths were reported in New York, 11 in Brooklyn, six in Boston, five in Cincinnati, three in Philadelphia and Holyoke, two in Chicago, Pittsburgh, Milwaukee, and Worcester, one in District of Columbia, Cambridge, and Fitchburg. From *whooping-cough*, 14 in New York, three in Brooklyn and Cincinnati, one in Philadelphia, Boston, Pittsburgh, Providence, and Cambridge. From *typhoid fever*, three in New York, two in St. Louis, one in Philadelphia, Brooklyn, Chicago, Baltimore, Boston, District of Columbia, Cincinnati, Pittsburgh, Providence, Lowell, New Bedford, and Salem. From *erysipelas*, four in New York, one in Philadelphia, Brooklyn, Chicago, St. Louis, Baltimore, District of Columbia, Milwaukee, Providence, and Lowell. From *measles*, four in New York and Pittsburgh, one in Chicago. From *cerebro-spinal meningitis*, one in Philadelphia, Chicago, Baltimore, Milwaukee, Charleston, Nashville, Lynn, and Newburyport. From *malarial fever*, four in New York. From *remittent fever*, three in Brooklyn. From *intermittent fever*, two in Brooklyn. In the nineteen cities of Massachusetts, with an estimated population of 880,950, there was a great increase in the mortality from scarlet fever; a decrease from other "zymotics" and pulmonary diseases.

The weather continued moderate and fine at the east, chilly on the lakes, cooler than usual at the south, the meteorological record for the week in Boston (latitude 42° 21', longitude 71° 4') being as follows:—

Date.	Barom- eter.	Thermom- eter.		Relative Humidity.				Direction of Wind.			Velocity of Wind.			State of Weather. ¹			Rainfall.		
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in Inches.
April 27	30.226	47	61	38	96	64	57	72	W	E	S	10	10	9	O	G	G	—	—
" 28	30.066	57	70	44	84	70	80	78	SE	E	SW	4	1	8	O	H	O	—	—
" 29	29.988	58	69	47	100	80	100	86	SW	W	S	5	4	5	R	F	O	—	.83
" 30	29.699	55	63	47	100	88	76	88	E	NW	O	5	14	0	R	O	F	—	.73
May 1	29.730	50	61	43	78	39	62	39	NW	W	W	10	14	12	F	F	C	—	.01
" 2	29.863	46	53	38	67	70	56	64	W	E	N	6	11	16	C	F	O	—	—
" 3	29.933	45	56	40	65	63	62	63	W	N	W	6	16	3	F	O	F	—	—
Week.	29.929	51	70	38				73	W			1226 miles.						26.30	1.57

¹ O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; T., threatening.

For the week ending April 12th, in 149 German cities and towns, with an estimated population of 7,410,565, the death-rate was 28.0, a decrease of 1.5 from the previous week, typhus fever showing a considerable increase, and pulmonary diseases a decline; the deaths from small-pox rose to three. Three thousand nine hundred and eighty-seven deaths were reported: 637 from consumption, 510 from acute diseases of the respiratory organs, 168 from diarrheal diseases, 150 from diphtheria and croup, 52 from typhoid fever, 49 from measles, 47 from whooping-cough, 44 from scarlet fever, 30 from puerperal fever, 17 from typhus fever. The death-rates ranged from 12.3 in Stettin to 48.5 in Crefeld.

For the week ending April 19th, in the 20 English cities having an estimated population of 7,383,999, the death-rate was 25.9, an increase of 1.1 from the previous week. The mortality from pulmonary diseases was still declining, although excessive; scarlet fever showed a decided increase, small-pox (in London) remaining about the same. The death-rates ranged from 14.6 in Portsmouth to 31.6 in Liverpool.

Small-pox continues fatal in India, Paris, Vienna, St. Petersburg, and Budapesth; fevers in India, St. Petersburg, Paris, and the Italian cities; diphtheria in Austria and Italy. The sanitary condition of the towns in Turkey and Russia has been very much improved, with a great diminution in the prevalence of disease. No new cases of the plague have been reported, and the governments of Europe are less stringent in their regulations with regard to it. Asia Minor has not been cleaned; typhus fever is widely prevalent there.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE HOSPITAL SERVICE. MARCH 18 TO MAY 5, 1879, INCLUSIVE.

HEBERSMITH, E., surgeon. To proceed to San Francisco and relieve Surgeon C. N. Ellinwood. April 4, 1879.

ELLINWOOD, C. N., surgeon. When relieved by Surgeon E. Hebersmith, to proceed to New York and assume charge of the service at that port. April 4, 1879.

BAILHACHE, P. H., surgeon. Detailed as a member of the National Board of Health. March 28, 1879. Directed in addition to act as president of Board of Examiners. March 29, 1879.

VANSANT, JOHN, surgeon. Detailed as member of Board of Examiners. March 29, 1879. On completion of this duty to proceed to Boston and assume charge of the service at that station. April 4, 1879.

MILLER, T. W., surgeon. Detailed as recorder Board of Examiners. March 29, 1879.

LONG, W. H., surgeon. To proceed to Chattanooga, Tenn., as inspector; on completion of this duty to rejoin his station. March 17, 1879.

MURRAY, R. D., surgeon. On expiration of leave of absence to proceed to Norfolk, Va., and relieve Surgeon Sawtelle. April 28, 1879.

SAWTELLE, H. W., surgeon. Promoted surgeon May 5, 1879, vice Hamilton, promoted.

DOERING, E. J., surgeon. Promoted surgeon May 5, 1879, to fill original vacancy.

GASSAWAY, J. M., assistant surgeon. To proceed to Portland and Astoria, Oregon, as inspector; on completion of this duty to rejoin his station. March 18, 1879.

GODFREY, JOHN, assistant surgeon. To proceed to Pensacola, Fla., as inspector; on completion of this duty to rejoin his station. April 11, 1879.

GOLDSBOROUGH, C. B., assistant surgeon. To report to the general superintendent Life Saving Service, for special duty, physical examination of surfmen. March 22, 1879. To report to Surgeon Bailhache for temporary duty at Baltimore. April 10, 1879.

WHITE, ROBERT, JR., assistant surgeon. To proceed to San Francisco, and report to Captain G. W. Bailey, commanding U. S. Rev. Str. Rush, for duty as medical officer. April 26, 1879.

KEYES, H. M., assistant surgeon. To Cincinnati to relieve Surgeon Vansant. March 31, 1879.

GLAZIER, W. C. W., assistant surgeon. To report to the general superintendent Life Saving Service, for special duty, physical examination of surfmen. March 22, 1879.

The following candidates, having passed the required examination, were appointed assistant surgeons, May 5, 1879: CHARLES L. DANA, of New York, assigned to temporary duty at New York city. HENRY P. COOKE, of Virginia, to report for assignment to Surgeon Hutton, New Orleans. H. R. CARTER, of Maryland, to report to Surgeon Vansant, Boston, for temporary duty. WILLIAM H. HEATH, of Pennsylvania, assigned to temporary duty in the office of the surgeon general, Washington, D. C.

THE MASSACHUSETTS MEDICAL SOCIETY will meet in Horticultural Hall, 110 Tremont Street, on Tuesday, June 10, 1879, at ten o'clock, A. M. The following is a list of the papers to be read:—

- I. The Physician's True Position in Society. By Rollin C. Ward, M. D., of Northfield.
- II. Cases of Insanity following Acute Diseases. By James B. Ayer, M. D., of Boston.
- III. Intestinal Catarrh of Infants. By George K. Sabine, M. D., of Brookline.
- IV. The Trials and Triumphs of the Country Doctor. By Benjamin D. Gifford, M. D., of South Chatham.
- V. Insane Drunkards. By Theodore W. Fisher, M. D., of Boston.
- VI. Some Diseases of the Eye requiring Immediate Treatment. By Charles H. Williams, M. D., of Boston.

The programme for Tuesday afternoon is as follows: At three o'clock, the following papers will be read by members of the Massachusetts Medico-Legal Society:—

- I. A Digest of "Returns" from Members of the Society for Year ending December 31, 1878. By the Corresponding Secretary, Medical Examiner F. Winsor, M. D.
- II. Duties of Officers under the Present Law of Medical Examiners, and the Relations of the Community thereto. By Associate Member Hon. Asa French.
- III. Report of a Committee on Ex-

pert Testimony: What it is, and what it should be. IV. Report of a Committee on the Use of the Metric System of Weights and Measures in Forensic Medicine. V. A Medico-Legal Case of Abortion followed by Conviction. By Medical Examiner J. C. Gleason, M.D. VI. On Pathological Changes in Pyæmia and Septicæmia. By Associate Member E. G. Cutler, M.D. VII. Evidences of Abortion derived from Clinical and Post-Mortem Teaching. By Medical Examiner C. C. Tower, M.D. VIII. On Death by Lightning. By Medical Examiner J. L. Sullivan, M.D.

During the afternoon the Warren Museum at the Medical College, North Grove Street, the Warren Museum of Natural History, 92 Chestnut Street, the Children's Hospital, 1429 Washington Street, and the Museum of the Natural History Society, Berkeley Street, will be open to the Society.

The Annual Discourse will be delivered on Wednesday at twelve o'clock by Dr. George W. Garland, of Lawrence. The annual dinner will be served in the Music Hall at one o'clock. Dr. Christopher C. Holmes is the anniversary chairman.

In the Lower Horticultural Hall there will be an exhibition of surgical instruments and various pharmaceutical preparations.

The annual meeting of the councilors will be held at the Medical Library, 19 Boylston Place, on Tuesday, June 10th, at seven P. M.

BOSTON SOCIETY FOR MEDICAL OBSERVATION.—A regular meeting will be held on Monday evening next, May 19th, at eight o'clock, in the hall of the Medical Library Association, 19 Boylston Place. Reader, Dr. Beach. Subject, Surgical Cases.

FREDERICK C. SHATTUCK, *Secretary*.

ESSEX NORTH DISTRICT MEDICAL SOCIETY.—The annual meeting of this society was held on Wednesday, at the Eagle House, Haverhill. There was a large attendance of members from the neighboring towns and cities, and the meeting was unusually interesting. The committee on nominations reported the following list of officers for the ensuing year, which report was unanimously adopted: President, Dr. W. H. Kimball, of Andover; Vice-President, Dr. John Crowell, of Haverhill; Secretary and Treasurer, Dr. George W. Snow, of Newburyport; Librarian, Dr. Sidney Drinkwater, of Haverhill; Commissioner on Trials, Dr. S. K. Towle, of Haverhill; Corresponding Secretary, Dr. E. P. Hurd, of Newburyport; Nominating Committee for State Society, Dr. C. G. Carleton, Lawrence; Councilors, Drs. David Dana, C. G. Carleton, R. B. Root, Geo. W. Snow, J. C. Howe, S. K. Towle, Wm. Cogswell, I. A. Douglass; Censors, Drs. E. P. Hurd, C. D. Hunking, Geo. W. Garland, Michael Roberts, O. F. Seavey. A valuable and scholarly paper was presented by Dr. Hurd on Animal Heat and Fever. The paper presented a fine *résumé* of the recent literature on the subject, and the reading, which occupied about an hour, was listened to with unusual interest. The essay was followed by a lively discussion, which was participated in by most of the members present. At two o'clock the members of the society sat down to a good dinner.

UNITED STATES MARINE HOSPITAL SERVICE.—The following gentlemen, having passed the examination required by the regulations governing the marine hospital service, have been appointed assistant surgeons in that service by the secretary of the treasury: Drs. Charles L. Dana, H. P. Cooke, H. R. Carter, and W. H. Heath. Assistant Surgeon Charles L. Dana ordered to New York city, Assistant Surgeon W. H. Heath to Washington, D. C., and H. R. Carter to Boston, Mass., for temporary duty. Assistant Surgeon H. P. Cooke ordered to New Orleans, La.

BOOKS AND PAMPHLETS RECEIVED.—Hints in the Obstetric Procedure. By William B. Atkinson, A. M., M. D. Philadelphia: D. G. Brinton. 1879.

Opium as a Tonic and Alterative, and its Hypodermic Use in the Debility and Amaurosis sometimes consequent upon Onanism. By B. A. Pope, M. D. (Reprint from the New Orleans Medical and Surgical Journal, February, 1879.)

Circulars of Information of the Bureau of Education. No. 1. 1879.

Training Schools for Nurses. Washington: Government Printing Office. 1879.

Tenth Annual Report of the State Board of Health of Massachusetts. January, 1879. Boston: Rand, Avery & Co.

Transactions of the Detroit Medical and Library Association. April, 1879.